

CLAIMS

1. A method of protecting a part made of composite material containing carbon against oxidation, the part presenting residual open internal pores, the method comprising using a solution containing at least one metal phosphate, and being characterized in that it comprises at least one step of applying an impregnation composition containing at least one metal phosphate and titanium diboride.  
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2. A method according to claim 1, characterized in that titanium diboride is present in the impregnation composition in the form of a powder having grain size lying in the range 0.1 µm to 200 µm.  
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3. A method according to claim 1 or claim 2, characterized in that the impregnation composition also contains a refractory solid filler.  
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4. A method according to claim 3, characterized in that the additional refractory solid filler is selected from silica, aluminum, clays, kaolin, and talc.  
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5. A method according to any one of claims 1 to 4, characterized in that the impregnation composition contains at least one metal phosphate selected from aluminum, zinc, and magnesium phosphates.  
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6. A method according to any one of claims 1 to 5, characterized in that the impregnation composition contains, in percentage by weight, 20% to 70% metal phosphate(s), 5% to 50% titanium diboride, 20% to 50% water, and 0% to 40% refractory solid filler other than titanium diboride.  
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7. A method according to any one of claims 1 to 6, characterized in that it includes a preliminary stage of

treating the composite material part by impregnating it with a solution containing a wetting agent, and drying it, so as to confer wettability on the composite material that is increased by the presence of the wetting agent.

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8. A method according to any one of claims 1 to 7, characterized in that it includes at least one step of applying a solution of at least one metal phosphate without any solid filler, prior to applying the impregnation  
10 composition containing at least metal phosphate in solution and titanium diboride.

9. A composite material part containing carbon and provided with protection against oxidation that comprises at least one  
15 metal phosphate, the part being characterized in that the protection against oxidation also comprises titanium diboride.

10. A part according to claim 9, characterized in that the protection against oxidation further comprises refractory  
20 solid filler.

11. A part according to claim 9 or claim 10, characterized in that the protection against oxidation presents a higher content of titanium diboride in a portion situated close to a  
25 surface of the part than in a portion that is further away deep under the surface of the part.